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# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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November 2, 2010

TO: Internal File

THRU: Steve Christensen, En Sci III, Reclamation Hydrologist, Team Lead *S/C*  
Jim Smith, En Sci III, Permit Supervisor, Task Manager *DS 16.000 2010*

FROM: Pete Hess, En Sci III, Reclamation Cost Estimate / Bond *PHH by SOS*

RE: MIDTERM PERMIT REVIEW, Sunnyside Cogeneration Associates,  
Sunnyside Refuse and Slurry, C/007/035, Task ID #3655

### SUMMARY:

The Division initiated a mid-term review of the Sunnyside Refuse and Slurry mining and reclamation plan (Task ID # 3547) on June 30, 2010. The Permittee had not submitted a revised reclamation cost estimate using 2010 unit costs, and was thus required to do so by the deficiency aired on August 4, 2010.

The Permittee responded on October 12, 2010, submitting an updated reclamation cost estimate for the 202 acres of disturbance. This memo will discuss the adequacy of the revised reclamation cost estimate.

## RECLAMATION PLAN

### **BONDING AND INSURANCE REQUIREMENTS**

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

#### **Analysis:**

## **General**

### **Form of Bond**

The bond which is currently in place to ensure the reclamation of the 202 acres of disturbance associated with the Sunnyside Refuse / Slurry permit area is a collateral bond based on treasury securities held by Wells Fargo Bank (the escrow agent).

### **Determination of Bond Amount**

The amount of bond currently posted for the Sunnyside Cogeneration facility is \$ 1,775,000.00.

**Table 8-1**, submitted as part of the Permittee's Task ID # 3655 response contains unit costs determined for 2010 as determined from information received from local construction companies, the Caterpillar Performance handbook, and the 2010 R.S. Means Heavy Construction Cost Data Handbook. Soil volumes estimated to reclaim the disturbance were obtained from the approved reclamation plan, with the new cost estimates subsequently determined.

### **Demolition Cost for 2010**

The new demolition cost determined by the Permittee using up to date unit costs for 2010 amounted to \$ 130,042, as compared to the old demolition cost of \$ 135,262.00.

### **Backfilling and Grading Cost for 2010**

The updated 2010 unit costs for backfilling and grading generated a revised subtotal of \$ 784,755 as compared to the old cost determination of \$ 864,839.00.

The difference in the two cost figures (\$ 80,084.00) comes from using four 651 E scrapers in the 2007 reclamation cost estimate (Task ID # 2765) versus using four Caterpillar 631 E scraper (400 CY/Hr vs 375 CY/Hr). The hourly operating cost differential of \$ 72.22 is also a major factor (651E @ \$312.22 / hour versus \$ 240.00 / hour for the 631E). All other factors such as material volume to be moved as well as number of scrapers to be used is constant.

The re-calculated backfilling and grading cost using 2010 cost data and equipment production figures is calculated to be \$ 784,756.00.

### **Revegetation Cost for 2010**

The Permittee provided the following information as obtained from Granite Seed Company located in Lehi, Utah. The cost of seed for a one-acre plot of Atriplex/Grass Areas at the MRP approved application rate is \$359.00 per acre.

The cost of seed for a one acre plot of Pinyon / Juniper / Sagebrush at the approved MRP application rate is \$ 566.00 per acre.

The cost of seed for Hydrophytic Vegetation Areas per acre at the MRP approved application rate is \$ 279.90 per acre.

The calculated revegetation cost for the 202 acres of disturbance associated with the Sunnyside Cogeneration facility is \$ 317,076.00.

#### **Total Direct Costs for 2010**

The subtotal of the direct costs to reclaim the facility is \$ 1,231,873.00.

Indirect costs are calculated at 26.8 % of the direct costs, or \$ 330,142.00.

Total cost in 2010 Dollars amounts to \$ 1,562,015.00.

Escalation of this amount to 2015 dollars using the .005 factor provided by OSM is (.025) \$ 39,050.00.

The total escalated reclamation cost estimate for 2015 is \$ 1,601,065.38.

The amount of bond posted (in 2009 dollars) is \$ 1,775,000. This amount is 9.8% greater than the dollar amount needed to reclaim the site.

#### **Terms and Conditions for Liability Insurance**

The Permittee maintains liability insurance in accordance with the requirements of R645-301-890. The policy is renewed annually. The Division reviews the terms of the policy during each of the quarterly complete inspections.

#### **Findings:**

The Permittee's response identified as Task ID # 3655 meets the requirements of the R645 Coal Mining Rules.